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DETAILED ACTION

This application is a 371 (national stage application) of PCT/GB04/05183.

Claims 1-44 are pending. Claims 1-44 are under examination.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement(s) (IDS) submitted on June 7, 2008, was filed before the mailing date of the first office action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97 & 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. Claims 2, 15, 24, & 37 are objected to because of the following informalities:

Claims 2 & 24 contain improper Markush groups in that they recite "... selected from the group consisting of ... or ..." whereas proper Markush claiming is "... selected from the group consisting of ... and ..." See MPEP § 2173.05(h).

When materials recited in a claim are so related as to constitute a proper Markush group, they may be recited in the conventional manner, or alternatively. For example, if "wherein R is a material selected from the group consisting of A, B, C and D" is a proper limitation, then "wherein R is A, B, C or D" shall also be considered proper.

In claims 15 & 37, it appears that the word "that" in line 2, should be "than".

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Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 11, 17-20, 26, & 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 11, 26, & 30 recite concentrations expressed as “g/l” or “grams per litre” but it is unclear what substance's volume is to be measured in liters. It is unclear whether the volume measured is that of the entire composition, the amine adjuvant (which may be a liquid), some unclaimed solvent, or even the air (if the sample were to be aerosolized). The examiner chooses to interpret the claims as referring to the volume of the composition as a whole, but it would be remedial to amend the claims to more clearly define their metes and bounds.

Claims 17-20 recite “the amine adjuvant” in line 2. It is unclear whether applicant is using “the amine adjuvant” to stand in the place of the first adjuvant, i.e., “an amine or a salt thereof or a C2-C4 short chain alkyl quaternary ammonium salt adjuvant” or if applicant intends that the first adjuvant be limited, in these claims, to an amine only and not a salt thereof. The examiner will interpret the claim as the former; however, it would be remedial to amend the claim to clarify the intended meaning.

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Claims 17 & 18 ultimately depend from claim 15. Claim 15 recites that the second adjuvant is present in a lower concentration than the first adjuvant. The ranges claimed in claims 17 & 18 encompass situations where the second adjuvant is present in higher concentration than the first. This is, therefore, a broadening of the subject matter and is internally inconsistent, hence the metes and bounds of the claim are indefinite. Claims 39 & 40 similarly broaden the subject matter of claim 37, resulting in similar indefiniteness.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6 & 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasebe et al. (US Patent 6,034,035).

Claims 1-6: Hasebe et al. disclose a composition containing paraquat (agrochemical active ingredient) and diethanolamine oxalate (amine salt, ethanolamine salt) where the concentration of agrochemical is 120g/L and the ratio of diethanolamine oxalate to paraquat is 1:1.86 (Example 3 Table 4, Herbicide composition (17) which contains Enhancer composition 17 from Example 1 Table 2).

Claims 23-28: Claims 23-28 are method claims that are necessarily carried out through the making of the compositions claimed in claims 1-6, as the only definitive step

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claimed is mixing together ingredients. Therefore, the claimed methods are anticipated by the same disclosure as outlined above in the rejection of claims 1-6.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 1, 7, 12-23, 29, & 34-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasebe et al. (US Patent 6,034,035).

Applicant claims

Applicant claims an agrochemical composition comprising an agrochemical active ingredient and an amine or a salt thereof or a C2-C4 short-chain alkyl quaternary ammonium salt adjuvant. Applicant further claims a second adjuvant, preferably a surfactant, and claims specific ratios of the adjuvants and active ingredients.

Determination of the scope and content of the prior art (MPEP 2141.01)

Hasebe et al. teach, as a whole, stabilizing adjuvants for bipyridinium herbicides.

Since claims 7, 12-22, 29 & 34-44 depend from claims 1 & 23, rejection of claims 1 & 23 under 35 USC 103 is also appropriate. Detailed discussion of the rejection of claims 1 & 23 and the teachings of Hasebe et al. appears above.

Claims 7 & 29: As stated above, Hasebe et al. teach a ratio amine salt to active ingredient of 1:1.86, which is just outside the claimed range of 1:10 to 1:2, but close enough that one skilled in the art would have expected them to have the same properties, hence a prima facie case of obviousness exists. (See MPEP § 2144.05)

Claims 12-22: Hasebe et al. teach a variety of surfactants can be used in the composition (column 4, lines 27-31). Hasebe et al. also teach a variety of compounds that are included in the composition as enhancers, (column 2, line 61 through column 4, line 7) though they could be classified as surfactants. Among the specific categories

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included are betaines (column 3, lines 56-60), amine ethoxylates (column 3, lines 7-16), and alkyl quaternized amines (cationic surfactants, column 3, lines 40-55). Hasebe et al. teach the molar ratio of the two adjuvants as between 1:10 and 10:1 (column 4, lines 20-26). Hasebe et al. teach the ratio of the adjuvants to the herbicide is 1:20 to 50:1 (column 2, lines 49-54). Where the general conditions are known in the prior art, it is not inventive to discover the workable or optimum ranges by routine experimentation.

Claims 34-44: Claims 34-44 are method claims that are necessarily carried out through the making of the compositions claimed in claims 12-22, as the only definitive step claimed is mixing together ingredients. Therefore, the claimed methods are rendered obvious by the same disclosure as outlined above in the rejection of claims 12-22.

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

The difference between the teachings of Hasebe et al. and the instant claims is that Hasebe et al. do not exemplify an embodiment that meets all the claimed limitations.

**Finding of *prima facie* obviousness
Rationale and Motivation (MPEP 2142-2143)**

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to formulate an herbicidal composition as taught by Hasebe et al. and produce the instant invention. The skilled artisan would have been

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motivated to formulate a composition from the ingredients taught by Hasebe et al. because it is within purview of the skilled artisan to select a known material based on its suitability for its intended use. Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle (see MPEP § 2144.07).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in formulating an herbicidal composition as taught by Hasebe et al. and producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

12. Claims 1-4, 8-11, 23, 27, & 30-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Hasebe et al. (US Patent 6.034.035) in view of Ashford et al. (WO 02/076212).

Applicant claims

Applicant claims an agrochemical composition comprising an agrochemical active ingredient and an amine or a salt thereof or a C2-C4 short-chain alkyl quaternary ammonium salt adjuvant. Applicant further claims a purgative and gelling agent in the composition.

**Determination of the scope and content of the prior art
(MPEP 2141.01)**

Since claims 8-11 & 30-33 depend from claims 1-4, 23, & 27 rejection of claims 1-4, 23, & 27 under 35 USC 103 is also appropriate. Detailed discussion of the rejection of claims 1-4, 23, & 27 and the teachings of Hasebe et al. appears above.

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

The difference between the teachings of Hasebe et al. and the instant claims is that Hasebe et al. do not teach the inclusion of a gelling agent and purgative in the composition. This deficiency in Hasebe et al. is cured by the teachings of Ashford et al.

Ashford et al. teach, as a whole, an herbicidal composition containing diquat and/or paraquat along with a gelling agent and purgative.

Claims 8, 9, & 11: Ashford et al. teach including magnesium sulfate as a purgative in herbicidal composition in an amount of 10-400, preferably 10-100, g/L (page 11, lines 8-13).

Claim 10: Ashford et al. teach adding alginate, which gels at the pH of human gastric juice, to the composition as a gelling agent (page 5, lines 1—14).

Claims 30, 31, & 33: Claims 30, 31, & 33 are method claims that are necessarily carried out through the making of the compositions claimed in claims 8, 9, & 11, as the only definitive step claimed is mixing together ingredients. Therefore, the claimed methods are rendered obvious by the same disclosure as outlined above in the rejection of claims 8, 9, & 11.

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Claim 32: Claim 32 is a method claim that is necessarily carried out through the making of the composition claimed in claim 10, as the only definitive step claimed is mixing together ingredients. Therefore, the claimed method is rendered obvious by the same disclosure as outlined above in the rejection of claim 10.

**Finding of *prima facie* obviousness
Rationale and Motivation (MPEP 2142-2143)**

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to add the gelling agent and purgative as taught by Ashford et al. to the composition of Hasebe et al. in order to improve safety and produce the instant invention. The skilled artisan would have been motivated to add the gelling agent and purgative to the herbicidal composition because it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, namely as herbicides, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art (See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) and MPEP § 2144.06)..

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in adding the gelling agent and purgative as taught by Ashford et al. to the composition of Hasebe et al. and producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

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In light of the forgoing discussion, one of ordinary skill in the art would have concluded that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-4 & 6-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 & 6-22 of copending Application No. 10/578,211 (the '211 application). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '211 application are species of the instant claims where the amine

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adjuvant is cyclic. As such, the claims of the '211 application anticipate the claims of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

15. Claims 8-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8-22 of copending Application No. the 10/596,281 (the '281 application). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '281 application are species of the instant claims where the herbicide is specified and the amine adjuvant is a non-surfactant present in a specific amount. As such, the claims of the '281 application anticipate the claims of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Claims 1-44 are rejected. Claims 2, 15, 17, 18, 24, 37, 39, & 40 are objected to. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lea whose telephone number is (571) 270-5870. The examiner can normally be reached on Mon-Thu 7:30-5:00 ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571)272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616